IN THE CLAIMS:

Please enter this Listing of Claims into the application. This listing of claims replaces all prior versions and listing of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for promoting homologous recombination, the method comprising

contacting an isolated polynucleotide comprising a desired sequence to be recombined with proteins the promote chromatin formation to generate ~~providing~~ a nucleosomal polynucleotide comprising histones; ~~and~~

, contacting, under conditions that support homologous recombination, the nucleosomal polynucleotide with a target nucleic acid ~~sequence~~, wherein the target nucleic acid comprises a nucleotide sequence homologous to the nucleosomal polynucleotide; and

contacting the nucleosomal polynucleotide and target nucleic acid with a recombinase comprising Rad51 associated activity.

2-3. (Cancelled)

4. (Withdrawn) The method of claim 2, wherein the recombinase comprises Rad54 associated activity

5. (Currently Amended) The method of claim [[2]] 1, wherein the recombinase is an isolated or recombinant recombinase ~~exogenously produced~~.

6. (Withdrawn) The method of claim 2, wherein the recombinase is endogenously produced.

7. (Withdrawn) The method of claim 2, wherein the recombinase is a recombinosome.

8. (Original) The method of claim 1, wherein the contacting is *in vitro*.

9. (Withdrawn) The method of claim 1, wherein the contacting is *in vivo*.

10. (Currently Amended) The method of claim 1, wherein the target nucleic acid ~~sequence~~ is an exogenously provided nucleic acid ~~sequence~~.

11. (Withdrawn) The method of claim 1, wherein the target nucleic acid sequence is an endogenous sequence.

12. (Withdrawn) The method of claim 11, wherein the endogenous sequence is a chromosomal sequence.

13. (Currently Amended) The method of claim 1, wherein the target nucleic acid ~~sequence is~~ comprises a coding sequence.

14. (Withdrawn) The method of claim 1, wherein the target nucleic acid sequence is non-coding sequence.

15. (Withdrawn) The method of claim 14, wherein the non-coding sequence is a promoter, enhancers, silencer, origin of replication or splicing signal sequence.

16. (Original) The method of claim 1, wherein the histones are core histones.

17. (Original) The method of claim 1, wherein the nucleosomal polynucleotide is a plasmid.

18. (Withdrawn) The method of claim 1, wherein the nucleosomal polynucleotide comprises a nucleic acid sequence that corrects a genetic mutation associated with a disease allele.

19. (Currently Amended) The method of claim 1, wherein the nucleosomal polynucleotide comprises a nucleic acid sequence that generates a genetic mutation in a targeted ~~sequence~~nucleic acid.

20. (Withdrawn) The method of claim 18, wherein the genetic mutation is selected from the group consisting of base substitutions, additions, and deletions, or any combination thereof.

21. (Currently Amended) The method of claim 19, wherein the genetic mutation alters the expression of one or more genes in a targeted nucleic acid ~~sequence~~.

22. (Withdrawn) A method of ameliorating disease caused by a disease allele, the method comprising: a) providing a nucleosomal polynucleotide comprising histones and a nucleic acid sequence that corrects a genetic mutation associated with a disease allele; and b) contacting, under conditions that support homologous recombination, the polynucleotide of a) with a target nucleic acid sequence associated with the disease allele, wherein the target nucleic acid comprises a nucleotide sequence homologous to the nucleosomal polynucleotide.

23. (Withdrawn) The method of claim 22, wherein the contacting is *in vivo*.

24. (Withdrawn) The method of claim 22, wherein the conditions that support homologous recombination include a recombinase.

25. (Withdrawn) The method of claim 24, wherein the recombinase comprises Rad51 and Rad54 associated activity.

26. (Withdrawn) The method of claim 24, wherein the recombinase is endogenously produced.

27. (Withdrawn) The method of claim 22, wherein the contacting is *in vivo*.

28. (Withdrawn) The method of claim 22, wherein the target nucleic acid sequence is an endogenous sequence.

29. (Withdrawn) The method of claim 28, wherein the endogenous sequence is a chromosomal sequence.

30. (Currently Amended) A method for promoting homologous strand pairing, the method comprising ~~providing~~

contacting an isolated polynucleotide comprising a desired sequence to be recombined with proteins that promote chromatin formation to generate a nucleosomal polynucleotide comprising core histones; ~~and~~

contacting, under conditions that support homologous strand pairing, the nucleosomal polynucleotide with a target nucleic acid ~~sequence~~ comprising a sequence homologous to the polynucleotide; and

contacting the nucleosomal polynucleotide and target nucleic acid with a recombinase comprising Rad51 activity.

31. (Previously Presented) The method of claim 19, wherein the genetic mutation is selected from the group consisting of base substitutions, additions, and deletions, or any combination thereof.

32. (New) The method of claim 1, wherein the proteins that promote chromatin formation are selected from the group consisting of ACF, NAP1, topoisomerase I, histones and any combination thereof.

33. (New) The method of claim 30, wherein the proteins that promote chromatin formation are selected from the group consisting of ACF, NAP1, topoisomerase I, histones and any combination thereof.